



UNITED STATES PATENT AND TRADEMARK OFFICE

Handwritten mark

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,349	05/04/2006	Ulrich Brochheuser	GKNG 1264 PCT	5630
27256	7590	04/11/2007	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			WOLFE, DEBRA M	
			ART UNIT	PAPER NUMBER
			3725	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/11/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/562,349	Applicant(s) BROCHHEUSER ET AL.	
	Examiner Debra Wolfe	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 8-15 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/25/2005</u> | 6) <input type="checkbox"/> Other: _____ |



DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 6 and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ilhara et al (US PG PUB 2002/0092168 A1). Ilhara et al discloses a process of producing an inner profile in a hollow profile (Wb of rod W3) comprising of inserting a hollow profile (Wb of rod W3) into a supporting sleeve (41) with a first end being axially supported, placing a pressure-loaded annular die (43) on to a second end (Wba) and pressing a forming die (42) with an outer profile (see lines 4-6 of [0051]) into the hollow profile (W3) from the second end (Wba) for producing the inner profile (W4b₆) and allowing a return of the annular die (43) under a pressure load in the opposite direction of that of pressing in the forming die (42). It is noted that Ilhara et al states in lines 14-16 of paragraph [0059] that the second end (Wba) is not constrained during the forming operation, therefore the annular die (43) must return in the opposite direction to the pressing movement for the backward extrusion process to be successful.

With reference to claim 6, the pressure load on the annular die (43) is reduced with an increasing return path. It would be inherent to one of ordinary skill in the art that the pressure load acting on the annular die (43) must be reduced with an increasing return path (pressure acting upon the annular die (43) by the second end (Wba)) in order for the inner profile to be formed by the backward extrusion process.



With reference to claims 10 and 11, the inner profile is a ball track profile (W4b₆) as seen in figure 3(c).

With reference to claim 12, figure 4(b) shows the second end (Wba) being only radially supported by the sleeve (41).

With reference to claim 13, the supporting sleeve (41) is axially longer than the hollow profile (W3) as seen in figure 4(b).

With reference to claim 14, the annular die (43) retracts during the step of pressing in response to a backward flow of material. It is noted that Ilhara et al discloses the annular die (43) does not constrain the second end (Wba) in order to allow a backward extrusion process.

With reference to claim 15, the annular die (43) and the pressing die (42) are coaxially arranged as seen in figure 4(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilhara et al (US PG PUB 2002/0092168 A1) in view of Budrean et al (US Patent # 4,785,648). Ilhara et al discloses the invention substantially as claimed except for wherein the inner profile is a splined shaft profile however, Budrean et al teaches the use of pressing dies having a splined outer profile for the purpose of forming a splined shaft profile in a hollow profile or tube. Therefore it



would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the outer profile of the pressing die in Ilhara et al to have a splined outer profile as taught by Budrean et al in order to obtain a splined inner shaft profile. It is further noted that Applicant fails to disclose any criticality to the splined shaft profile (see page 6 lines 3-4 of the sixth paragraph).

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Ilhara et al fails to disclose the reduction of the pressure load on the annular die is such that the sum of an integrated wall friction between the hollow profile and the supporting sleeve and the pressure load on the annular die remains approximately constant.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 7am - 4:30pm with alternating Friday 7am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




Application/Control Number: 10/562,349
Art Unit: 3725

Page 5

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra Wolfe
Examiner
Art Unit 3725


DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700